# UserAuthentication :

**package** com.example.demo;

**import** org.springframework.security.authentication.\*;

**import** org.springframework.security.core.\*;

**import** org.springframework.security.core.authority.SimpleGrantedAuthority;

**import** java.util.ArrayList;

**import** java.util.List;

**import** java.util.Optional;

**public** **class** CustomAuthenticationProvider **implements** AuthenticationProvider {

List<User> dummyUsers = **new** ArrayList<>();

**public** CustomAuthenticationProvider() {

dummyUsers.add(**new** User("user1", "abcd", "ROLE\_USER"));

dummyUsers.add(**new** User("admin", "xyz", "ROLE\_ADMIN"));

}

@Override

**public** Authentication authenticate(Authentication authentication) **throws** AuthenticationException {

String name = authentication.getName();

String password = authentication.getCredentials().toString();

//jdk 8 -- stream

Optional<User> authenticatedUser = dummyUsers.stream().filter(

user -> user.getName().equals(name) && user.getPassword().equals(password)

).findFirst();

**if**(!authenticatedUser.isPresent()){

**throw** **new** BadCredentialsException("Some Text");

}

List<GrantedAuthority> authorities = **new** ArrayList<>();

authorities.add(**new** SimpleGrantedAuthority(authenticatedUser.get().getRole()));

Authentication auth = **new** UsernamePasswordAuthenticationToken(name, password, authorities);

**return** auth;

}

@Override

**public** **boolean** supports(Class<?> aClass) {

**return** aClass.equals(UsernamePasswordAuthenticationToken.**class**);

}

}

MainController:

**package** com.example.demo;

**import** org.springframework.web.bind.annotation.RequestMapping;

**import** org.springframework.web.bind.annotation.RestController;

@RestController

**public** **class** MainController {

@RequestMapping("/")

**public** String hello(){

**return** "Hello World, Welcome";

}

@RequestMapping("/protected")

**public** String protectedHello(){

**return** "Hello World, i was protected";

}

@RequestMapping("/admin")

**public** String admin(){

**return** "Hello World from admin";

}

}

User:

**package** com.example.demo;

**public** **class** User {

**private** String name;

**private** String password;

**private** String role;

**public** User(String name, String password, String role) {

**this**.name = name;

**this**.password = password;

**this**.role = role;

}

**public** String getName() {

**return** name;

}

**public** **void** setName(String name) {

**this**.name = name;

}

**public** String getPassword() {

**return** password;

}

**public** **void** setPassword(String password) {

**this**.password = password;

}

**public** String getRole() {

**return** role;

}

**public** **void** setRole(String role) {

**this**.role = role;

}

}

SpringSecurityConfig:

**package** com.example.demo;

**import** org.springframework.context.annotation.Configuration;

**import** org.springframework.security.config.annotation.authentication.builders.AuthenticationManagerBuilder;

**import** org.springframework.security.config.annotation.web.builders.HttpSecurity;

**import** org.springframework.security.config.annotation.web.configuration.~~WebSecurityConfigurerAdapter~~;

@Configuration

**public** **class** SpringSecurityConfig **extends** ~~WebSecurityConfigurerAdapter~~ {

// Protecting the urls with a role-based access.

@Override

**protected** **void** configure(HttpSecurity http) **throws** Exception {

http.httpBasic().and().authorizeRequests()

.antMatchers("/").permitAll()

.antMatchers("/protected").hasRole("USER")

.antMatchers("/admin").hasRole("ADMIN");

}

@Override

**protected** **void** configure(AuthenticationManagerBuilder auth) **throws** Exception {

auth.authenticationProvider(**new** CustomAuthenticationProvider());

}

}

Pom.xml:

<?xml version="1.0" encoding="UTF-8"?>

<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"

xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 https://maven.apache.org/xsd/maven-4.0.0.xsd">

<modelVersion>4.0.0</modelVersion>

<parent>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-parent</artifactId>

<version>2.7.3</version>

<relativePath/> <!-- lookup parent from repository -->

</parent>

<groupId>com.example</groupId>

<artifactId>SpringSecurity</artifactId>

<version>0.0.1-SNAPSHOT</version>

<name>SpringSecurity</name>

<description>Demo project for Spring Boot</description>

<properties>

<java.version>1.8</java.version>

</properties>

<dependencies>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-web</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-test</artifactId>

<scope>test</scope>

</dependency>

<dependency>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-starter-security</artifactId>

</dependency>

<dependency>

<groupId>org.springframework.security</groupId>

<artifactId>spring-security-test</artifactId>

<scope>test</scope>

</dependency>

</dependencies>

<build>

<plugins>

<plugin>

<groupId>org.springframework.boot</groupId>

<artifactId>spring-boot-maven-plugin</artifactId>

</plugin>

</plugins>

</build>

</project>